

Abstract of the Disclosure

**METHOD FOR THE CONTROLLED TRANSPORT OF MAGNETIC BEADS
AND DEVICE FOR EXECUTING SAID METHOD.**

The present invention is related to a method and corresponding devices for controlled transport of magnetic beads between a position X and different position Y, wherein said magnetic beads are manipulated or transported by applying successively a series of N local magnetic fields which have magnetic field gradients different from 0 in the neighborhood of said magnetic beads. Each of these N local magnetic fields is generated by a single current carrying structure, in which the current density is not constant. The invention mainly points to application in the domain of biochips and micro-arrays, used in diagnostics, genetics and molecular studies.

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